Claim listing

What is claimed is:

1-11. (canceled)

12. (amended) An isolated polypeptide comprising an amino acid sequence at least 80% identical to a sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:3, and SEQ ID NO:4, and wherein said amino acid sequence is a murine norovirus sequence.

13. (amended) The isolated polypeptide of claim 12, wherein the sequence is at least 95% identical to a sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:3, and SEQ ID NO:4.

14. (amended) The isolated polypeptide of claim 12 wherein the sequence consists of a sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:3, and SEQ ID NO:4.

15-35. (canceled)

36. (new) A method for determining presence, absence or quantity of antibody against MNV-1 in a fluid or tissue sample of a mouse, the method comprising:

a) contacting the fluid or tissue sample with at least one MNV-1 polypeptide; and

b) detecting binding of the at least one MNV-1 polypeptide to antibody against MNV-1 if present in the sample.

37. (new) A method in accordance with claim 36, wherein detecting binding comprises detecting MNV-1 antibody bound to the at least one MNV-1 polypeptide with a labeled antibody that detects presence of mouse antibody.

38. (new) A method in accordance with claim 36, wherein the at least one MNV-1 polypeptide is immobilized on a solid immunosorbent surface.

39. (new) A method in accordance with claim 36, wherein the solid immunosorbent surface is an ELISA plate.

40. (new) A method in accordance with claim 36, wherein the fluid or tissue sample of the mouse is selected from the group consisting of a serum sample, a saliva sample, a feces sample and a tissue sample of the mouse.

41. (new) A method in accordance with claim 36, wherein the fluid or tissue sample of the mouse is a serum sample of the mouse.

42. (new) A method in accordance with claim 36, wherein the at least one MNV-1 polypeptide comprises at least 20 contiguous amino acids of the at least one MNV-1 polypeptide.

43. (new) A method in accordance with claim 36, wherein the at least one MNV-1 polypeptide is an MNV-1 capsid protein.

44. (new) A method in accordance with claim 36, wherein the at least one MNV-1 polypeptide comprises at least one epitope of an MNV-1 protein.

45. (new) A method in accordance with claim 36, wherein detecting antibodies against MNV-1 in a fluid or tissue sample of a mouse comprises detecting seroconversion for MNV-1 in the mouse.

46. (new) An assay surface for detecting antibody against MNV-1, comprising at least one MNV-1 polypeptide immobilized on an immunosorbent surface.

47. (new) The assay surface in accordance with claim 46, wherein the at least one MNV-1 polypeptide has a sequence selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 3, and SEQ ID NO: 4.

48. (new) The assay surface in accordance with claim 46, wherein the immunosorbent surface is an ELISA plate.

49. (new) A method of making an assay surface for detecting antibody against MNV-1, the method comprising immobilizing at least one MNV-1 polypeptide on an immunosorbent surface.

50. (new) A method of making an assay surface in accordance with claim 49, wherein the immunosorbent surface is an ELISA plate.

51. (new) A method of making an assay surface in accordance with claim 49, further comprising expressing the at least one MNV-1 polypeptide in cells.

52. (new) A method of making an assay surface in accordance with claim 48, further comprising transforming or transfecting the cells with at least one MNV-1 polynucleotide encoding the at least one MNV-1 polypeptide.

53. (new) A method of making an assay surface in accordance with claim 49, further comprising cloning at least one of the transformed or transfected cells.

54. (new) A method of making an assay surface in accordance with claim 49, wherein the MNV-1 polypeptide comprises at least 20 contiguous amino acids of an MNV-1 protein having an amino acid sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO: 3 and SEQ ID NO: 4.

55. (new) A method of making an assay surface in accordance with claim 49, wherein the MNV-1 polypeptide is an MNV-1 capsid protein.

56. (new) A method of making an assay surface in accordance with claim 55, wherein the MNV-1 polypeptide comprises at least one epitope of the MNV-1 capsid protein.

57. (new) A kit for detecting seroconversion comprising an MNV-1 polypeptide immobilized on a solid surface.

58. (new) A kit for detecting seroconversion in accordance with claim 57, further comprising reagents for detecting binding of the MNV-polypeptide with MNV-1 antibody if present in a sample.

59. (new) A kit for detecting seroconversion in accordance with claim 57, wherein the solid surface is an ELISA plate.

60. (new) A method for determining presence, absence or quantity of MNV-1 in a fluid or organ sample of a mouse, the method comprising:

a) synthesizing cDNA from RNA comprised by the fluid or organ sample; and

b) detecting MNV-1 cDNA by a PCR assay if MNV-1 is present in the sample.

61. (new) A method in accordance with claim 60, wherein the PCR assay is selected from the group consisting of a real time PCR assay and a nested PCR assay.

62. (new) A method in accordance with claim 60, wherein the PCR assay uses at least one sense primer and at least one antisense primer, wherein the sequence of the sense primer is selected from the group consisting of SEQ ID NO:15, SEQ ID NO:17 and SEQ ID NO:19, and the sequence of the antisense primer is selected from the group consisting of SEQ ID NO:16, SEQ ID NO:18 and SEQ ID NO:20.